INTERNATIONAL SEARCH REPORT

Int nal Application No
PCT/IL 03/00728

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61L27/38 A61L27/26 A61K35/32 A61K35/28

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61L A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, MEDLINE, WPI Data, PAJ, COMPENDEX, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 437 018 B1 (GERTZMAN ARTHUR A ET AL) 20 August 2002 (2002-08-20) column 1, line 16 - line 21 column 9, line 11 -column 10, line 20 claims 1,226,27; example IX	1-50
X	US 6 326 018 B1 (GERTZMAN ARTHUR A ET AL) 4 December 2001 (2001-12-04) column 5, line 65 -column 6, line 26; claim 1	1-50
X	EP 0 419 275 A (OSTEOTECH INC) 27 March 1991 (1991-03-27) column 1, line 25 - line 33 column 3, line 17 - line 55 column 4, line 30 - line 49 column 5, line 17 - line 38; claims 1-3,18; example 1	1-50

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[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
29 January 2004	10/02/2004

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Ganschow, S

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 314 476 A (PREWETT ANNAMARIE B ET AL) 24 May 1994 (1994-05-24) column 4, line 26 - line 68 column 4, line 58 -column 7, line 6; claims 1,7,9,15,16,19; example 2	1-50
Y	WO 96 28539 A (MORPHOGEN PHARMACEUTICALS INC ;NORTH SHORE UNIV HOSPITAL (US)) 19 September 1996 (1996-09-19) abstract page 11, line 1 -page 13, line 33 page 15, line 1 -page 17, line 13	1-50
Y	DATABASE MEDLINE 'Online! US NATIONAL LIBRARY OF MEDICINE (NLM), BETHESDA, MD, US; October 1992 (1992-10) DOHI Y ET AL: "Osteogenesis associated with bone gla protein gene expression in diffusion chambers by bone marrow cells with demineralized bone matrix." Database accession no. NLM1456085 XP002228843 abstract & JOURNAL OF BONE AND MINERAL RESEARCH: THE OFFICIAL JOURNAL OF THE AMERICAN SOCIETY FOR BONE AND MINERAL RESEARCH. UNITED STATES OCT 1992, vol. 7, no. 10, October 1992 (1992-10), pages 1173-1180, ISSN: 0884-0431	1-50
Y	WO 99 11298 A (GENSCI REGENERATION LAB INC) 11 March 1999 (1999-03-11) page 3, line 6 - line 18 page 5, line 30 -page 8, line 35; claim 1; example 1	1-50
Y	DATABASE MEDLINE 'Online! US NATIONAL LIBRARY OF MEDICINE (NLM), BETHESDA, MD, US; November 1982 (1982-11) LINDHOLM T S ET AL: "Extraskeletal and intraskeletal new bone formation induced by demineralized bone matrix combined with bone marrow cells." Database accession no. NLM6216033 XP002228845 abstract & CLINICAL ORTHOPAEDICS AND RELATED RESEARCH. UNITED STATES 1982 NOV-DEC, no. 171, November 1982 (1982-11), pages 251-255, ISSN: 0009-921X	1-50

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 01 41821 A (BIOSYNTECH CANADA INC ;RODRIGUES EL ZEIN ANNABELLE (CA); CHAPUT CY) 14 June 2001 (2001-06-14) claims 1-4,13,35,39,40	1-50
Y	DATABASE MEDLINE 'Online! US NATIONAL LIBRARY OF MEDICINE (NLM), BETHESDA, MD, US; April 1995 (1995-04) CONNOLLY J F: "Injectable bone marrow preparations to stimulate osteogenic repair." Database accession no. NLM7641502 XP002228844 abstract & CLINICAL ORTHOPAEDICS AND RELATED RESEARCH. UNITED STATES APR 1995, no. 313, April 1995 (1995-04), pages 8-18, ISSN: 0009-921X	1-50

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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☒ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Present claim 1 relates to 'site-responsive polymers'.
Dependent claim 26 defines said 'responsive polymeric system' as selected from a group consisting of a variety of different compounds. However, some of these compounds do not appear to represent 'site-responsive polymers' such as:
glycerol (no polymer), oligosaccharides, oligopeptides, peptides, proteins, enzymes, growth factors, hormones and drugs.

This inconsistency between the compounds of claim 26 and claim 1 implies that the subject-matter for which protection is sought may be different to that defined by present independent claim 1, thereby resulting in a lack of clarity (Article 6 PCT).

In fact, claim 26 contains so many possibilities (such as 'drugs') that a lack of clarity (and/or conciseness) within the meaning of Article 6 PCT arises to such an extent as to render a meaningful and complete search of the claims impossible.

Moreover, claims 1 and 26 are not supported by the description as required by Article 6 PCT, as their scope is broader than justified by the examples as the examples only refer to temperature-sensitive polymers (RTG polymers) and silane-based polymeric material.

Consequently, the search has been carried out for those parts of the application which do appear to be clear (and/or concise), namely pH-responsive, thermosensitive, ionic strength-reactive or site-responsive polymers, alginates, hyaluronic acid, collagen, gelatin, chitosan, cellulose, agarose, polyacrylic acid, PVA, PEO, TMPO, saccharides, peptides, proteins, enzymes, growth factors, hormones, oligoHEMA etc.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

Information on patent family members

Int nal Application No
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